PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7:		(11) International Publication Number: WO 00/14283
C12Q 1/68	A2	(43) International Publication Date: 16 March 2000 (16.03.00
(21) International Application Number: PCT/US (22) International Filing Date: 23 August 1999 (2)		MX, SG, European patent (AT, BE, CH, CY, DE, DK, ES
(30) Priority Data: 09/138,195 21 August 1998 (21,08.98)	τ	Published S Without international search report and to be republished upon receipt of that report.
(71) Applicant: NAXCOR [US/US]; Suite 220, 4600 B Drive, Menlo Park, CA 94025 (US).	ohanno	n
(72) Inventors: HUAN, Bingfang; 10266 Mann Drive, C CA 95014 (US). ALBAGLI, David; 1080 San Mate Menlo Park, CA 94025 (US). WOOD, Michael Tyrella Court, Mountain View, CA 94043 (US) ATTA, Reuel, B.; 505 Cypress Point Drive, N Mountain View, CA 94043 (US). CHENG, Peter, Robalo Court, San Jose, CA 95132 (US).	o Driv , L.; 3 . VA o. 22	6 N 1.
(74) Agents: CHOW, Y., Ping et al.; Heller Ehrman & McAuliffe, 525 University Avenue, Palo A 94301-1900 (US).	n Whi Ito, C	

(54) Title: ASSAYS USING CROSSLINKABLE IMMOBILIZED NUCLEIC ACIDS

(57) Abstract

Improved methods for in situ hybridization assays of cellular and subcellular systems and tissue sections, and immobilization—based assay techniques such as Northern blotting, Southern blotting, dot blots, and the like, and assay techniques wherein the probes are bound to substrates are disclosed. The subject invention employs crosslinker containing hybridization probes capable of forming covalent bonds between the probe and the target nucleic acid. Upon activation, the crosslinker will, if the probe has hybridized with its essentially complementary target, form covalent bonds with the complementary strand to covalently crosslink the probe to the target. Subsequently, stringent wash conditions may be employed to reduce background signals due to non-specific absorption or probes or targets, while retaining all crosslinked probe/target hybrids. Also disclosed are diagnostic kits for use in clininical and diagnostic laboratories.